We Claim:

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1. A method for transmitting encoded data between synchronized sending and receiving digital systems across a lossy transmission media, said sending and receiving digital systems maintaining encoder and decoder information records, said method comprising the steps of:

encoding packet data to be transmitted by said sending digital system using encoding information in an encoder information record that has been previously acknowledged by said receiving digital system;

building a new encoder information record including the encoding information used to encode said packet data as well as the packet data;

transmitting the encoded packet data to said receiving digital system as a packet including a header having a packet number and a tag identifying the encoding information used to encode the packet data;

when the packet is received by said receiving digital system, examining the header to determine the encoding information used to encode said packet data;

decoding the packet using corresponding decoder information in said decoder information record and updating the decoder information in said decoder information record with said packet data;

acknowledging processing of the packet to said sending digital system to enable said sending digital system to update said encoder information so that said new encoder information record is used to encode packet data; and

when the packet is lost, conditioning said encoder information to rebuild the new encoder information without the lost packet data.

2. The method of claim 1 wherein said conditioning step is performed when a packet is received out of sequence and a predetermined amount of time elapses without said missing packet being received.

3. The method of claim 2 wherein packets received out of sequence are stored in a queue and wherein a packet timer is initiated to count said predetermined

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amount of time when a packet is received out of sequence, said packet timer being stopped when said missing packet is received.

4. The method of claim 3 wherein said conditioning step includes the step of sending a synch control packet to said sending digital system, said synch control packet including a tag identifying the last processed packet, said sending digital system using said synch control packet to rebuild said new encoder information record.

5. The method of claim 4 wherein said conditioning step further includes the steps of initiating a synchronization timer when said synch control packet is sent; stopping said timer when an acknowledgment is received from said sending digital system in response to said synch control packet; and resending the synch control packet and reinitiating the synchronization timer if said synchronization timer expires and an acknowledgment has not been received.

6. The method of claim 5 wherein said conditioning step further includes the steps of incrementing a counter each time a synch control packet is sent; comparing the value of said counter to determine if the value equals a threshold prior to resending the synch control packet and reinitiating the synchronization timer; and resetting the communication link between said sending and receiving digital systems if the value of said counter equals said threshold value.

7. The method of claim 1 wherein during said acknowledging step, an acknowledgment packet is returned to said sending digital system, said acknowledgment packet including identifying the last packet processed by said receiving digital system.

8. The method of claim 1 wherein during said acknowledging step, an acknowledgment header encapsulating data packets is returned to said sending digital system, said acknowledgment header identifying the last packet processed by said receiving digital system.

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9. The method of claim 1 further comprising the steps of, prior to decoding said packets, examining said packets to detect corrupted packets and discarding corrupted packets.

10. The method of claim 9 wherein during said examining step a cyclic redundancy check is performed on said packets.

11. The method of claim 10 further comprising the step of discarding received packets having packet numbers outside of a define range of the packet numbers of the expected packets.

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